Application No. 09/486,073
Reply to.Office Action of December 3, 2004
Docket No. 2001-1236

## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## LISTING OF CLAIMS:

1-48. (canceled)

- 49. (previously presented) A viable bacterium of the species *Neisseria meningitidis*, comprising a mutation in an *lpxA* gene, wherein said mutation causes the bacterium to lack endotoxic lipopolysaccharide (LPS).
- 50. (previously presented) The bacterium according to claim 49, wherein the bacterium lacks Lipid A.

## 51. (canceled)

- 52. (previously presented) An immunogenic composition comprising a bacterium according to claim 49, or a component part of the bacterium as active component.
- 53. (previously presented ) The composition according to claim 52, wherein the bacterium is a live attenuated bacterium.

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- 54. (previously presented) The composition according to claim 52, wherein the component part of the bacterium is an outer membrane vesicle, an outer membrane complex or an outer membrane protein.
- 55. (previously presented) The composition according to claim 52, wherein the composition is substantially free of endotoxic LPS as determined with a Limulus assay.
- 56. (previously presented) The composition according to claim 52, wherein the composition further comprises an adjuvant.
- 57. (previously presented) A method for producing an immunogenic composition comprising culturing a bacterium according to claim 49, isolating the bacterium in a LPS culture and incorporating the bacterium, as an active component into said composition to produce an immunogenic composition.
- 58. (previously presented) The method according to claim 57, further comprising incorporating an adjuvant into said composition.
- 59. (previously presented) A method for producing an LPS-free outer membrane protein from Neisseria meningitidis

comprising culturing a bacterium according to claim 49, isolating outer membrane proteins from the culture, testing the outer membrane isolated proteins to determine whether the outer membrane proteins are free of LPS, and recovering LPS-free outer membrane proteins from the culture.

- 60. (previously presented) A viable bacterium of the species Neisseria meningitidis, comprising an inactive lpxA gene or an lpxA knock-out mutant with an lpxD-fabZ-lpxA insert.
- 61. (previously presented) The bacterium according to claim 60, wherein the bacterium lacks Lipid A.

## 62. (canceled)

- 63. (previously presented) An immunogenic composition comprising a bacterium according to claim 60, or a component part of the bacterium as active component.
- 64. (previously presented) The composition according to claim 63, wherein the bacterium is a live attenuated bacterium.
- 65. (previously presented) The composition according to claim 63, wherein the component part of the bacterium is an outer

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membrane vesicle, an outer membrane complex or an outer membrane protein.

- 66. (previously presented) The composition according to claim 63, wherein the composition is substantially free of endotoxic LPS as determined with a Limulus assay.
- 67. (previously presented) The composition according to claim 63, wherein the composition further comprises an adjuvant.
- 68. (previously presented) A method for producing an immunogenic composition comprising culturing a bacterium according to claim 60, testing the culture to determine whether said culture contains LPS-free bacterium, isolating said bacterium, and incorporating the bacterium, as an active component into said composition.
- 69. (previously presented) A method according to claim 68, further comprising incorporating an adjuvant into said composition.
- 70. (previously presented) A method for producing an LPS-free outer membrane protein from Neisseria meningitidis comprising culturing a bacterium according to claim 60 isolating

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outer membrane proteins from the culture, testing the outer membrane isolated proteins to determine whether the outer membrane proteins are free of LPS, and recovering an LPS-free outer membrane proteins from the culture.

71. (previously presented) An immunogenic composition comprising a bacterium according to claim 60.